

REMARKS

Claims 1-15 are currently pending in the application. Claims 1, 6, and 11 are the independent claims. Applicants respectfully request an allowance of claims 1-15.

Rejection under 35 U.S.C. §103(a)

The Examiner rejected claims 1-15 under 35 USC 103(a) as being unpatentable over Krause (2005/0280568), in view of Lacy et al. (2004/0205485), and in further view of Karim (2003/0217108). The Examiner stated that Krause discloses a communication network where a user can access via a plurality of data processor controlled interactive display terminals for sending and receiving broadcasting packets, means for temporarily storing broadcasting payload, means for temporarily stripping the broadcasting payload from the broadcasting packet, means for transmitting the coded header of the broadcasting packet to the receiving server via the broadcasting router, means for transmitting the broadcasting payload to its coded header in the receiving server via the broadcasting router (Krause, page 7, paras [0076-0077], page 10, para [0094], page 11, para [0102]).

The Examiner admitted that Krause fails to disclose an electronic document distribution system for routing broadcasting packets from a sending server to a receiving server, and relies upon Karim as disclosing this feature (See Karim, page 3, paras [0051], [0057]). The Examiner also admitted that Krause fails to disclose inside a broadcasting router as a coded header by temporarily coding the broadcasting payload to a set of symbols and means for adding the coded symbols to a header of the broadcasting packet and means for converting the coded set of symbols of the broadcasting payload from its

coded format to form a full broadcasting packet in the receiving server. The Examiner relies upon Lacy et al. as disclosing these features (See Lacy, page 1, paras [0008], [0011], and page 2, para [0021]).

The Examiner stated that while Krause discloses means for temporarily replacing the stripped broadcasting payload (Krause, page 7, para [0077], page 10 [0094], page 11 [0102]), Krause fails to disclose with a set of coded symbols in the broadcasting packet. The Examiner relies upon Lacy as disclosing coded symbols in the broadcasting packet (Lacy, page 1, para [0008], [0011], page 2, para [0021]). The Examiner stated it would have been obvious to incorporate the use of an electronic document distribution system, taught by Karim, with incorporating the coding payload with coded symbol of Lacy, in the system of Krause for the purpose of generating and distributing packets throughout the network/destination in a very efficient manner to reduce network congestion.

Krause discloses a system and method for increasing the number of services that can be encrypted with existing conditional access equipment, and is used when many digitally compressed programs are encrypted at the same time. Only the most critical components of each compressed video, audio, or data stream are selected and then sequenced into a single stream. Additional formatting causes this sequence of segments from multiple sources to appear as a single continuous stream to the conditional access system. Once encrypted, this stream is demultiplexed and the components restored and resequenced into their respective programs. However, the system of Krause is not an electronic document distribution system for routing broadcasting packets from a sending server to a receiving server. And Krause does not disclose storing a broadcasting payload inside a broadcasting router as a coded header by temporarily coding the broadcasting

payload to a set of symbols, adding the coded symbols to a header of the broadcasting packet, and converting the coded set of symbols of the broadcasting payload from its coded format to form a full broadcasting packet in the receiving server, as claimed by the Applicants.

Karim discloses a method to allow electronic mail users to engage in an interactive dialog session without needing any other information required by proprietary interactive communication mechanisms, like proprietary user identifications or proprietary protocols not generally available to users who do not belong or subscribe to a particular user or technology community. The Examiner references paras [0051] and [0057] of Karim, which discuss the different names of the communication methodology as MailSpeak, MailChat, MailRap, InterWrite (Karim, para [0051]), and describe Fig. 1 as having "a Client Computer system with User 100 or the Sender, the associate Mail Server (Block 103) which has the user registered and is capable of locating the intended recipient and route the mail packet accordingly to the recipient address specified by the sender." (See Karim, para [0057]). Karim is only cited by the Examiner with regard to the portion of Applicant's preamble in Applicant's independent claims regarding "an electronic document distribution system for routing broadcasting packets from a sending server to a receiving server", and nothing further regarding the invention.

Lacy discloses an apparatus for compressing media content. Lacy discloses inserting a data stream not associated with the media content into a compressed media content bit stream, wherein the inserted data stream is carried by at least one symbol in at least one initial data set associated with the DBCA, such as by using designated symbols in one or more Huffman codebooks for embedding a watermark in the compressed bit

stream. (See Lacy, para. [0008]). Lacy further discloses that a plurality of predetermined portions of the media content can be compressed using data-based compression algorithms and grouped into a respectively different portion of the data frame. (See Lacy, para [0009]). "Initial data associated with each private data-based compression algorithm is encrypted and made publicly available when the data frames are made available. The encrypted initial data is grouped into a data envelope within a data frame that is preferably available no later than a first data frame containing media content compressed using the private data-based compression algorithm with which the encrypted initial data is associated, but can be made available during a later data frame." (See Lacy, para [0011]).

The watermarking technique used in Lacy is quite different from the coded header disclosed in the application. The application discusses how uneven speeds currently exist between the originator and the final receptors during message delivery because certain router paths are slower than the rest of the other pathways, limiting overall performance to the performance of the slowest pathways. The application is directed to strengthening the "weakest links" or optimizing the slowest and least efficient routers, so that bottlenecks that currently exist in the current art of transmitting broadcasting packets are eliminated. (See application, page 3, lines 22-29).

Independent claims 1, 6, and 11 claim the broadcast payload is stored inside a broadcasting router as a coded header by coding the broadcasting payload to a set of symbols temporarily, stripping the broadcasting payload temporarily from the broadcasting packet, replacing the broadcasting payload temporarily with a set of coded symbols in the broadcasting packet, and adding the coded symbols to a header of the

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broadcasting packet. The coded header of the broadcasting packet is then transmitted to the receiving server via the broadcasting router, and the broadcasting payload is transmitted to its coded header in the receiving server via the broadcasting router, where the coded set of symbols of the broadcasting payload is converted from its coded format to form a full broadcasting packet in the receiving server. (See page 4, lines 2-13 of the application, "Summary of the Present Invention"). The application explains "packet switching" (see page 3, lines 13-29 of the application), and how a packet-switching network handles information in small units, breaking long messages into multiple packets before routing. The application further states that "[T]hese multiple packets that make up the full broadcasting packet are referred to herein as 'broadcasting payload'." (See page 3, lines 17-18). The application explains how each payload may travel a different route, arriving at a receiver at different times or out of sequence, where the receiver's system then reassembles the original broadcasting packet/message correctly.

The application has limited the use of the word "symbol" to include data that is substantially smaller than the contents of the broadcasting payload to which the set of symbols would be coded to represent. The use of replacing the broadcasting packet with coded symbol to header is described in the application and the independent claims 1, 6, and 11 clearly state that the broadcasting payload is stored temporarily inside a broadcasting router as a coded header by coding the broadcasting payload to a set of symbols temporarily, stripping the broadcasting payload temporarily from the broadcasting packet, replacing the broadcasting payload temporarily with a set of coded symbols in the broadcasting packet, and adding the coded symbols to a header of the broadcasting packet.

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Independent claims 1, 6, and 11 also clarify that the coded header of the broadcasting packet is transmitted to the receiving server via the broadcasting router, and the broadcasting payload is transmitted to the coded header it corresponds to in the receiving server via the broadcasting router, and that the coded set of symbols of the broadcasting payload is converted from its coded format to form a full broadcasting packet, i.e. restore the original broadcasting packet, in the receiving server.

Independent claims 1, 6, and 11 state that a set of symbols is used for coding the broadcast payload, and that the broadcast payload is removed or stripped from the packet. Pages 2 and 3 of the application explain the current art of packet switching, wherein headers are added in or stripped from a packet's payload between the server and the user terminal. Krause discloses such a current art method of stripping an Ethernet header, i.e., "Once the Ethernet headers have been stripped, the remaining MPEG data is stored in buffer 832, which releases the data at a rate that is compatible with the CA input port on the IRT." (See Krause, page 7, para [0077]). However, in the application, *the broadcast payload is stripped temporarily from the broadcast packet*, and replaced with the smaller set of symbols representing the broadcast payload. Therefore, Krause does not disclose a "means for temporarily stripping the *broadcasting payload* from the broadcasting packet" as stated in the Office Action (See Office Action, page 4, second para.), but merely states a current art method described by the application of packet switching, wherein a header is stripped from a packet's payload.

The Examiner further relied upon Krause as disclosing "means for temporarily replacing the stripped *broadcasting payload*". However, Krause cannot replace what was not stripped in the first place, as shown above. In fact, Krause discloses replacing

the *headers* and *not the broadcasting payload* (See Krause, pages 10-11, para [0102]), i.e. "As before, the MPEG *packet headers can be replaced* with a modified header by using the DRAM Output Module's overlay mode." (*emphasis added*). While the Examiner cites Lacy as disclosing "with a set of coded symbols", to overcome the shortcomings in Krause, Lacy does not disclose "temporarily replacing the stripped broadcasting payload". And the watermarking method used in Lacy is not the same as the coded header and set of symbols used in the application.

Page 3, lines 13-21 of the application define "broadcast payload" as the small units of information that has been broken from long messages into multiple packets before routing that make up the full broadcasting packet in a packet-switching network. And on page 4, lines 7-13, "broadcasting payload" is stated to refer to "the parts of the broadcasting packet that separate for transmission of the broadcasting packet to later reassemble and form a full broadcasting packet." Applicants understand that application explains that a broadcasting packet contains more than one payload, and that the independent claims describe only one broadcasting payload. It is understood that the claims show the method and system of addressing one payload, which can be used multiple times for multiple broadcasting payloads, as there would be no difference in the system or method for each payload, and no differences would arise depending on the number or amount of payloads.

For the reasons cited above it is believed that independent claims 1, 6, and 11 are allowable over the 35 USC 103 rejections and over Krause, Lacy, and Karim, either alone or in combination.

Claims 2, 7, and 12 are rejected under 35 USC 103. Claims 2, 7, and 12 claim “reducing the broadcasting payload of the broadcasting packet to a coded header *of the broadcasting packet*.” Since Krause, Karim, and Lacy do not disclose this step, claims 2, 7, and 12 are patentable over the 35 USC 103 rejections. Claims 2, 7, and 12 depend from claims 1, 6, and 11. For this reason and the reasons described above, dependent claims 2, 7 and 12 are patentable over the 35 USC 103 rejections and the cited art.

Claims 3, 8, and 13 are rejected under 35 USC 103. Regarding the specification, Fig. 1 and page 6, lines 5-15 of the application show I/O devices connected to a system bus via user interface adapter and display adapter, and a keyboard and mouse interconnected to the bus through the user interface adapter. “It is through such input devices that the user at a *receiving* station may interactively relate to the Web *in order to access Web documents*. Display adapter includes a frame buffer, which is a storage device that holds a representation of each pixel on the display screen. Images may be stored in frame buffer for display on monitor through various components, such as a digital to analog converter and the like. *By using the aforementioned I/O devices, a user is capable of...receiving output information from the system via display (emphasis added).*”

Further, the application references Mastering the Internet, G.H. Cady et al., published by Sybex Inc., Alameda, Ca, 1996, for details on Internet nodes, objects and links, and for typical connections between local display stations to the Web via network servers, any of which may be used to implement the system on which the techniques described in the application are used. (Application, page 6, lines 23-25, and page 7, lines

3-6). The application describes that packets are created on either terminal 11 or 13 of Fig. 1, and sent via a narrow channel over the Web to a receiving terminal 15. The Web Service Provider system that may be based upon the POP (Post Office Protocol) system manages the distribution of these packets, as well as the distribution of other electronic documents and broadcasting packets.

"A key to the present invention is the separate temporary storage of the coded header of the broadcasting payload in the broadcasting routers, which is then transmitted to the receiving server via the broadcasting routers. The corresponding document of the broadcasting payload is transmitted to form a full broadcasting packet in the receiving server." (Application page 7, lines 19-24). Fig. 2 illustrates "a packet document or broadcasting packet being transmitted by a sender, e.g. packet on sending terminal 13... The broadcasting server 31 that temporarily stores the broadcasting payload 32 of the broadcasting packet in a coded header 38. This occurs by temporarily coding the broadcasting payload 32 to a set of symbols, temporarily stripping the broadcasting payload 32 from the broadcasting packet, and temporarily replacing the broadcasting packet with a coded symbol and adding the coded symbol to the header 38. The sending terminal 13 is able to transmit these coded headers 38 to the receiving terminal 11, where the broadcasting payload 32 is retrieved from storage and the coded header 38 is patched to the corresponding broadcasting payload 32. The broadcasting payload 32 is relayed to a destination router according to its address." (Application page 7, line 24-page 8, line 4).

Fig. 4 also shows the features of "receiving the coded header of the broadcasting packet and patching the broadcasting payload that corresponds to the set of coded symbols in the coded header from storage, and relaying the broadcasting payload to a

destination router according to its address to form the full broadcasting packet, of dependent claims 3, 8 and 13. "The coded header is then transmitted to the receiving server...The broadcasting payload is transmitted separately to its coded header...A full broadcasting packet is then formed in the receiving server when the broadcasting payload is relayed to its corresponding coded header according to its address." (Application page 8, lines 26-29).

Claims 3, 8 and 13 claim the coded header of the broadcasting packet is received and the broadcasting payload that corresponds to the set of coded symbols in the coded header is patched from storage, the broadcasting payload is relayed to a destination router according to its address to form the full broadcasting packet, unlike Krause, Karim, or Lacy, either alone or in combination. Claims 3, 8, and 13 depend from independent claims 1, 6, and 11, which are believed to be allowable over the 103 rejection and over Krause, Karim, and Lacy. For at least this reason and the reasons described above, dependent claims 3, 8, and 13 are patentable over the 103 rejection and the cited art.

Claims 4, 9, and 14 are rejected under 35 USC 103. The application references Mastering the Internet, G.H. Cady et al., published by Sybex Inc., Alameda, Ca, 1996, for details on Internet nodes, objects and links, and for typical connections between local display stations to the Web via network servers, any of which may be used to implement the system on which the techniques described in the application are used. (Application, page 6, lines 23-25, and page 7, lines 3-6).

The application also explains that the Web Service Provider system that may be based upon the POP (Post Office Protocol) system manages the distribution of these packets, as well as the distribution of other electronic documents and broadcasting

packets. The server system stores the in/out electronic documents of its clients at stations like 11 and 13 of Fig. 1 in storage facilities of limited capacity. The application describes a variation related to requested Web pages, wherein a Web page is requested by a Web station. An appropriate server at the Web site or Web page source gets the coded header, and the Web document is sent to the receiving display station. The broadcasting payload is transmitted to the coded header in the receiving display station to form the full broadcasting packet. (Application page 9, lines 1-5). Krause, Karim, and Lacy, either alone or in combination, do not disclose this step. Claims 4, 9, and 14 depend from independent claims 1, 6, and 11, and dependent claims 3, 8, and 13 discussed above, which are believed to be allowable over the 103 rejection. For at least this reason and the reasons described above, dependent claims 4, 9, and 14 are patentable over the 103 rejection, and over the cited art.

Claims 5, 10, and 15 are rejected under 35 USC 103. The application references Mastering the Internet, G.H. Cady et al., published by Sybex Inc., Alameda, Ca, 1996, for details on Internet nodes, objects and links, and explains that the Internet or Web is a global network of a heterogeneous mix of computer technologies and operating systems. "Higher level objects are linked to the lower level objects in the hierarchy through a variety of network server computers. *Digital packets are distributed through such a network.*" (emphasis added). (Application, page 6, lines 23-28).

The application also mentions that "images may be stored in frame buffer for display on monitor through various components, such as a *digital to analog converter.*" (Application page 6, lines 11-13). Claims 5, 10, and 15 depend from independent claims 1, 6, and 11, and dependent claims 3, 8, and 13 discussed above, which are believed to be

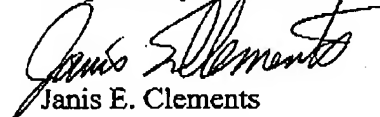
allowable over the 103 rejection. For at least this reason and the reasons described above, dependent claims 5, 10, and 15 are patentable over the 103 rejection, and the cited art.

Thus, it is submitted that claims 1-15 are submitted to be patentable under 35 USC 103(a), and over Krause, Karim, and Lacy, either alone or in combination. Applicants respectfully request an allowance.

Conclusion

In view of the foregoing, withdrawal of the rejections and the allowance of the current pending claims are respectfully requested. If the Examiner feels that the pending claims could be allowed with minor changes, the Examiner is invited to telephone the undersigned to discuss an Examiner's Amendment.

Respectfully submitted,



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